

Amendments to the Claims

Please cancel claims 1-35 and add new claims 36-42.

Claim 1-35 (Cancelled).

Claim 36 (New): A process for preparing halogenated alkanes whereby a haloalkane and a haloalkene are reacted in the presence of an alkyl phosphate to produce a halogenated alkane.

Claim 37 (New): The process of claim 36 wherein the haloalkane comprises carbon tetrachloride, the haloalkene comprises vinyl chloride, and the halogenated alkane comprises 1,1,1,3,3-pentachloropropane.

Claims 38 (New): The process of claim 37 wherein the carbon tetrachloride and the vinyl chloride are reacted in a reactor having a temperature of at least 105°C.

Claim 39 (New): The process of claim 37 wherein the carbon tetrachloride and the vinyl chloride are reacted in a reactor having a pressure of from about 5 to about 15 psig.

Claim 40 (New): The process of claim 37 wherein the alkyl phosphate comprises tributyl phosphate.

Claim 41 (New): The process of claim 37 further comprising converting the 1,1,1,3,3-pentachloropropane to 1,1,1,3,3-pentafluoropropane.

Claim 42 (New): The process of claim 36 wherein the reacting occurs prior to isolating the halogenated alkane.

Claim 43 (New): A process for preparing halogenated hydrocarbons comprising:

reacting an alkene solution and a haloalkane in a reactor to form a halogenated alkane, the alkene solution comprising a haloalkene and at least about 3% (wt./wt.) alkyl phosphate;

removing the halogenated alkane from the reactor; and

continuously feeding the reactor a mixture comprising the alkene solution and the haloalkene, the mixture having a mole ratio of the alkene solution to the haloalkene of at least 1.07:1.

Claim 44 (New): The process of claim 43 wherein the haloalkane comprises carbon tetrachloride, the haloalkene comprises vinyl chloride, and the halogenated alkane comprises 1,1,1,3,3-pentachloropropane.

Claims 45 (New): The process of claim 44 wherein the reactor has a temperature of at least 105°C.

Claim 46 (New): The process of claim 44 wherein the reactor has a pressure of from about 5 to about 15 psig.

Claim 47 (New): The process of claim 44 wherein the alkyl phosphate comprises tributyl phosphate.

Claim 48 (New): The process of claim 44 further comprising converting the 1,1,1,3,3-pentachloropropane to 1,1,1,3,3-pentafluoropropane.

Claim 49 (New): A process of separating 1,1,1,3,3-pentafluoropropane from 1-chloro-3,3,3-trifluoropropene comprising:

distilling a mixture comprising 1,1,1,3,3-pentafluoropropane and 1-chloro-3,3,3-trifluoropropene to produce a first-distillate product rich in 1-chloro-3,3,3-trifluoropropene and a bottom product rich in 1,1,1,3,3-pentafluoropropane;

distilling said bottom product to produce a second-distillate product comprising essentially 1-chloro-3,3,3-trifluoropropene free 1,1,1,3,3-pentafluoropropane; and providing the first-distillate product to a halogenation reaction.

Claim 50 (New): The process of separating 1,1,1,3,3-pentafluoropropane from a mixture comprising 1,1,1,3,3-pentafluoropropane and 1-chloro-3,3,3-trifluoropropene comprising:

distilling a mixture comprising 1,1,1,3,3-pentafluoropropane and 1-chloro-3,3,3-trifluoropropene in the presence of HF to produce a bottom product comprising 1-chloro-3,3,3-trifluoropropene essentially free 1,1,1,3,3-pentafluoropropane and a distillate; and

providing the distillate to a halogenation reaction.